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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/972,161	10/05/2001	Rainer Kuth	P01,0322	4953

7590

03/27/2003

Schiff Hardin & Waite
Patent Department
6600 Floor Sears Tower
233 South Wacker Drive
Chicago, IL 60606

EXAMINER

SHRIVASTAV, BRIJ B

ART UNIT

PAPER NUMBER

2859

DATE MAILED: 03/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/972,161

Applicant(s)

KUTH, RAINER

Examiner

Brij B Shrivastav

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Dietz et al (DE 19,838,390).

As regards to claim 1, Dietz et al teach a magnetic resonance imaging apparatus (pages 1-3, second paragraphs), with first component group including a basic field magnet and a gradient coil system disposed in the first space (page 6, lines 9-18; figure 1, numerals 2, 4, 6), and a second component group including an examination subject and a support device adapted to move the subject into and out of the examination volume disposed in the second space (page 6, lines 19, 20, and page 7, lines 1-16; figure 1, numerals 10, 13, 14, 15). Further, Dietz et al teach a sound insulation material disposed between the first component group and the second component group to divide the installation space into two spaces which are acoustically insulated from each other (pages 3 and 5, lines 12-20 and 10-12; figure 1, numerals 16 and 18).

As regards to claim 5 Dietz et al further teach sound insulation includes a portion adjacent to the examination volume consisting of a material, which does not disruptively influence MR imaging (page 5, lines 10-18).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 2 and 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dietz et al (DE 19,838,390), and further in view of Dean et al (US 6,414,489).

As regards to claim 2, Dietz et al fail to further teach having no direct surface contact between the first component group (basic magnetic field and gradient coil components; figure 1, numerals 2 and 6), and the sound insulation material (figure 1, numeral 18). Dean et al teach first component group having direct contact with the sound insulation material (figures 2 and 4, numerals 10, 18, 20 and 36). It would have been obvious to one of ordinary skill in the art to combine Dean et al's invention, a moveable system, with the invention of Dietz et al, a fixed system, to make sound damping system cost effective, as it could be adopted to and used with more than one MRI machines.

As regards to claim 6, Dietz et al do not specifically teach the sound insulation material being selected from the group consisting of glass fiber reinforced plastic and aramid-fiber reinforced plastic. Dean et al teach foam and fiberglass or some such material for sound insulation, materials with low

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dielectric constant (columns 1 and 2, lines 55-67 and 11-15, figure 2, numeral 34 and 36). It would have been obvious to one of ordinary skill in the art to combine sound insulation system of Dean et al with the system of Dietz et al to further improve sound insulation, and reduce interference of the material used for insulation with the magnetic resonance imaging to improve image quality.

As regards to claims 7-9, Dietz et al do not further teach: a) sound insulating wall, which is the wall of the installation space, b) and the sound insulating wall has an opening to allow passage for the subject. Dean et al teach sound insulation wall, which is the wall of the installation space (figure 2, numerals 34 and 36), and the sound insulation wall has an opening to allow passage to the subject to enter to and come out of the imaging volume (figures 1 and 2, column 1, lines 55-57). It would have been obvious to one of ordinary skill in the art to combine the insulation system of Dean et al with the insulation system of Dietz et al to damp the noise further in the imaging volume and make the imaging volume space easily accessible to the subject to be imaged.

3. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dietz et al (DE 19,838,390), in view of Dean et al (6,414,489), and further in view of Oppelt (US 4,652,824).

As regards to claim 10, neither Dietz et al nor Dean et al teach sound insulation created by a vacuum vessel, which substantially closes the imaging volume and joined to the opening. Oppelt teaches sound insulation created by a vacuum vessel and joined to the opening (figure 1, numerals 1, 3 and 4). It would have been obvious to one of ordinary skill in the art to combine insulation system

of Oppelt with the insulation system of Dietz et al and Dean et al to further improve sound insulation to increase comfort of the imaging subject under.

4. Claim 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dietz et al (DE 19,838,390), and further in view of Furukawa (US 5,489,848).

As regards to claims 3 and 4, Dietz et al do not further teach sound insulation comprising a vacuum vessel and at least a portion of the vacuum vessel being disposed adjacent to the examination volume. Furukawa teaches sound insulation comprising a vacuum vessel and at least a portion of the vacuum vessel is disposed adjacent to the examination volume (figure 2, numerals 20 and 22, housing main magnet and gradient coils in vacuum chambers, and the examination volume, which is not numbered, but could be seen in figure 1). It would have been obvious to one of ordinary skill in the art to combine the vacuum vessel of Furukawa as sound insulator with the sound insulation system of Dietz et al to make the system cost effective and more efficient, as it would function both to damp sound and function as a super cooling system to cool the coils for proper functioning in an MRI machine.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brij B Shrivastav whose telephone number is 703-305-0649. The examiner can normally be reached between 7 AM to 4 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on 703-305-4816. The fax phone numbers for the organization where this application or proceeding is

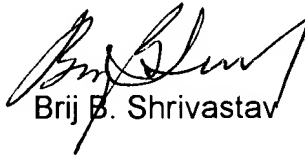
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assigned are 703-308-7722 for regular communications and 703-304-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-0956.

Bbs

March 19, 2003



Brij B. Shrivastav

Patent Examiner